

## CLAIMS

What is claimed is:

1           1. A method of enhancing the provision of voice  
2 services via packet switched facilities in which a voice  
3 switch is connected to the packet switched facilities using  
4 an associated attachment device, the method including:  
5           storing, in plural attachment devices, information  
6 respecting voice terminals accessible through the associated  
7 voice switch,

8           generating a request from a particular attachment  
9 device to another attachment device for information  
10 respecting voice terminals accessible via the another  
11 attachment device's associated voice switch, and

12           storing at the particular attachment device information  
13 received in response to the request from the particular  
14 attachment device.

1           2. The method of claim 1 wherein the particular  
2 attachment device, prior to generating a request to another  
3 attachment device, generates a query to one or more virtual  
4 circuits, accessible from the particular attachment device,  
5 to determine if the channel accesses another attachment  
6 device, and generates the request in an instance in which  
7 another attachment device is identified.

1           3. The method of claim 1 or claim 2 wherein the  
2 particular attachment device, transmits accessibility  
3 information, respecting voice terminals accessible through  
4 the voice switch associated with the particular attachment  
5 device, to the another attachment device.

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1 4. The method of claim 1 or claim 2 wherein the another  
2 attachment device responds to the request by the particular  
3 attachment device by transmitting the accessibility  
4 information respecting voice terminals reachable via the  
5 associated voice switch.

1 5. The method of claim 2 in which the particular  
2 attachment device stores, along with the information  
3 respecting voice terminals accessible through the another  
4 attachment device's associated voice switch, information  
5 identifying the particular circuit through which the another  
6 attachment device is accessible.

1 6. The method of claim 2 wherein the act of generating  
2 a query is executed on initialization of the particular  
3 attachment device.

1 **B** 7. The method of claim ~~4~~ or 5 which further includes  
2 exchanging identities of voice terminals accessible through  
3 the associated voice switch with other attachment devices  
4 when there is a change in the set of voice terminals  
5 accessible through the associated voice switch.

1 8. The method of claim 1 or claim 2 in which the  
2 attachment device is a frame relay attachment device and the  
3 packet switched facility is a frame relay network.

1 9. The method of claim 1 or 2 in which the voice switch  
2 is a PBX and is also coupled to the PSTN.

1 10. The method of claim 1 wherein the information  
2 respecting voice terminals accessible through the associated  
3 voice switch identifies terminals which are directly

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4 accessible to the associated voice switch or terminals which  
5 are accessible through the associated voice switch through a  
6 packet switched network.

1 ~~11.~~ A system for providing enhanced voice services via  
2 packet switched facilities including a voice switch  
3 connecting to the packet switched facilities with an  
4 associated attachment device, said system including:

5 means in plural attachment devices for storing  
6 information respecting voice terminals accessible through  
7 the associated voice switch,

8 means in a particular attachment device for generating  
9 a request to another attachment device for information  
10 respecting voice terminals accessible via the another  
11 attachment device's associated voice switch, and

12 second storing means in the particular attachment  
13 device for storing information received in response to the  
14 request.

1 12. The system as recited in claim 11 which further  
2 includes:

3 means in plural attachment devices for generating a  
4 query to one or more virtual circuits, accessible from an  
5 attachment device, to determine if the circuit accesses  
6 another attachment device, and wherein

7 said means in a particular attachment device for  
8 generating a request, generates the request in an instance  
9 in which another attachment device is identified at a  
10 particular circuit.

1 13. The system of claim 12 wherein the particular  
2 attachment device further includes transmit means for  
3 transmitting accessibility information, respecting voice

4 terminals accessible through the voice switch associated  
5 with the particular attachment device, to another attachment  
6 device after identifying the another attachment device.

1 14. The system of claim 13 wherein the attachment  
2 device includes means to respond to the request by  
3 transmitting the accessibility information respecting voice  
4 terminals accessible via the associated voice switch.

1 15. The system of claim 13 in which the means for  
2 storing stores, along with the information respecting voice  
3 terminals accessible through the attachment device's  
4 associated voice switch, information identifying the  
5 particular circuit through which the another attachment  
6 device is accessible.

1 16. The system of claim 12 or claim 13 wherein the  
2 means for generating a query is operated in response to  
3 initialization of the associated attachment device.

1 17. The system of claim 11 where plural attachment  
2 devices further include means, responsive to a change in the  
3 set of voice terminals accessible through the associated  
4 voice switch, for initiating an exchange of identities of  
5 voice terminals accessible through the associated voice  
6 switch with other attachment devices.

1 18. The system of claim 11 in which the attachment  
2 device is a frame relay attachment device and the packet  
3 switched facility is a frame relay network.

1 19. The system of claim 11 which the voice switch is a  
2 PBX and is also coupled to the PSTN.

1           20. The system of claim 11 wherein the information  
2     respecting voice terminals accessible through the associated  
3     voice switch identifies terminals which are directly  
4     accessible to the associated voice switch or terminals which  
5     are accessible through the associated voice switch through a  
6     packet switched network.

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